| Notice of Allowability | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/744,610 | BROSOW, JOERGEN | |
| | Examiner | Art Unit | |
| | Ahshik Kim | 2876 | |

***-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--***

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendment (11/8/04)*.

2. ☒ The allowed claim(s) is/are *31-39,42-44,46 and 48-50*.

3. ☒ The drawings filed on *26 January 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

## DETAILED ACTION

### *Amendment*

1. Receipt is acknowledged of the amendment filed on December 20, 2003. In the amendment claim 47 was canceled. Currently, claims 31-39, 42-44, 46, and 48-50 remain for examination.

### *Examiner's Amendment*

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was granted during a telephone interview with Mr. Kueffner (Reg. 29,482) on February 2, 2005 (see enclosed interview summary). As indicated in the interview summary, some claims were written without previously applied strike marks, making the dependencies of the claims unclear. It appears that such was typographical errors.

IN THE CLAIMS:

Claims 1-30 (Canceled)

31. (Previously amended) A safety paper with a) a structure in the form of an electronic circuit (1, 4, 7) making possible a contactless checking of an authenticity

feature, b) the circuit (1, 4, 7) comprising an electronic circuit chip and a pattern (7) connected therewith and serving as a sending/receiving antenna that, c) the electronic circuit, in response to a received input signal, is operative to emit emits an output signal indicating the presence of the authenticity feature, d) the and whose pattern (50, 50') serving as a sending/receiving antenna has the form of being formed as a dipole antenna comprised of two conductor strips (50, 50') extending along a common straight line, e) which at facing ends thereof are contacted with connecting areas (70, 70') of the circuit chip (40), f) the conductor strips and are formed by portions of a thin insulating polymer substrate strip that have been made conductive, between whose g) the circuit chip is positioned on an insulating portion, delimited between the facing ends of the conductor strips (50, 50'), the circuit chip (40) is positioned, wherein h) the circuit chip (40) is formed on a thin-ground semiconductor substrate which is arranged on the insulating portion of the polymer substrate strip.

32. (Previously presented) A safety paper with a structure in the form of an electronic circuit (1, 4, 7) making possible a contactless checking of an authenticity feature, the circuit (1, 4, 7) comprising an electronic circuit chip and a pattern (7) connected therewith and serving as a sending/receiving antenna that, in response to a received input signal, emits an output signal indicating the presence of the authenticity feature and whose pattern (50, 50') serving as a sending/receiving antenna has the form of a dipole antenna comprised of two conductor strips (50, 50') extending along a common straight line, which at facing ends thereof are contacted with connecting areas (70, 70') of the circuit chip (40) and are formed by portions of a thin insulating polymer substrate strip that have been made conductive, between whose insulating portion, delimited between the facing ends of the conductor strips (50, 50'), the circuit chip (40) is

positioned, wherein the structure forming the circuit (1, 4, 7) comprises an integrated polymer circuit chip (4) formed on a flexible polymer substrate.

33. (Previously presented) A safety paper with a structure in the form of an electronic circuit (1, 4, 7) making possible a contactless checking of an authenticity feature, the circuit (1, 4, 7) comprising an electronic circuit chip and a pattern (7) connected therewith and serving as a sending/receiving antenna that, in response to a received input signal, emits an output signal indicating the presence of the authenticity feature, wherein the pattern serving as a sending/receiving antenna is applied externally to the paper layer and is coupled capacitively by the paper layer, acting as a dielectric, to a remaining portion of the circuit embedded in the paper layer.

34. (Currently amended) A safety paper according claim 31~~-22~~, wherein a structure forming the circuit (1, 4, 7) comprises a read-only storage set to a predetermined information contents, whose information contents can be transmitted with the emitted output signal.

35. (Currently amended) A safety paper according to claim 31~~-22~~, wherein a structure (1, 4, 7) forming the circuit comprises a write/read storage into which information contents transmitted by the received input signal can be written whose information contents can be transmitted with the emitted output signal.

36. (Currently amended) A safety paper according to claim 35~~-26~~, wherein the write/read storage is formed by a shift register into which a binary representation of the information contents transmitted with the input signal can be sequentially stored.

37. (Currently amended) A safety paper according to claim 31~~-22~~, wherein a structure (1, 4, 7) forming the circuit comprises an energy supply which can be supplied by a contactless energy transmission.

38. (Currently amended) A safety paper according to claim 37~~-28~~, wherein energy transmission can be realized by a carrier frequency oscillation provided for modulation with the input signal.

39. (Currently amended) A safety paper according to claim 31~~-22~~, wherein a structure forming the circuit (1, 4, 7) is embedded in a paper layer of the safety paper.

Claims 40 - 41 (Canceled)

42. (Currently amended) A safety paper according to claim 31~~-22~~, wherein the pattern (1, 5, 5',7, 50, 50') serving as a sending/receiving antenna is comprised of a material whose expansion coefficient corresponds substantially to the expansion coefficient of the paper layer.

43. (Currently amended) A safety paper according to claim 31~~-22~~, wherein the circuit (1, 4, 7; 40, 50, 50', 70, 70') comprises a micro controller.

44. (Previously presented) A method for checking the authenticity of documents which are recorded in an optically readable form on a safety paper with a structure in the form of an electronic circuit making possible a contactless checking of an authenticity

feature, the circuit, in response to a received input signal, emitting an output signal representing the authenticity feature, comprising transmitting an input signal by the location checking the document to the circuit which triggers the emission of its output signal and the optically readable contents of the document as well as the authenticity feature are automatically detected and correlated with one another, wherein the input signal transmitted by the checking location to the circuit comprises an information contents which identifies the checking location and is stored in the circuit, wherein the stored information contents, which identifies the checking location, can be transmitted with the output signal to a checking location in response to an input signal transmitted subsequently by the checking location.

45. (Canceled).

46. (Currently amended) A method according to claim ~~44~~ 35, wherein the energy for operating the circuit is transmitted by the checking location with the input signal to the circuit.

47. (Canceled)

48. (Previously presented) A device for a contactless checking of authenticity of a document made of a safety paper, the document which is provided with an electronic circuit chip as well as a pattern connected thereto and serving as a sending/receiving antenna, the pattern serving as a sending/receiving antenna is and formed as a dipole antenna with dipole branches extending along a common straight line, wherein the electronic circuit chip, in response to a received input signal, emits is operative to emit an

output signal representing the authenticity feature, the device comprising: a transport device by which the documents (100) to be checked are transported along a movement path extending transverse to the common straight line of the dipole branches (50, 50'); , two conductors (103, 103') extending in the transport direction (100), one of them arranged in the area of the movement path of the one dipole branch (50) and the other in the area of the movement path of the other dipole branch (50'), respectively, for capacitive coupling with the moving dipole branches (50, 50'); , and a sending/receiving device coupled with the conductors (103, 103') for emitting the input signal for the circuit chip (40) and for receiving the output signal representing the authenticity signal.

49. (Currently amended) A document made of a safety paper according to claim 31~~-22~~, wherein the circuit chip (4, 40) is arranged in an area of the document that is not printed.

50. (Currently amended) A document made of a safety paper according to claim 31~~-22~~, wherein, in an area which is remote from the area in which the electronic circuit (4, 40) is arranged, an authenticity feature is arranged that is detectable contactless and can be input into the circuit and checked therein.

***Allowable Subject Matter***

3. Claims 31-39, 42-44, 46, and 48-50 are allowed.

4. The following is a statement of reasons for allowance: the claims are directed a security paper, particularly to a paper comprising authentication features. As indicated in previously cited references, safety papers such as bank notes, personal checks, and other papers of value

contain various security features so that it would be difficult to make counterfeits. However, the cited references, taken alone or in combinations, fail to suggest or teach the authentication feature comprising an electronic circuit for contactless checking, and the circuits and a pattern connected and serves as an antenna. The feature further discloses that the chip connects two conductor strips as set forth in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Ahshik Kim* whose telephone number is (571)272-2393. The examiner can normally be reached between the hours of 6:00AM to 3:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571)272-2398. The fax number directly to the Examiner is (571)273-2393. The fax phone number for this Group is (703)872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [ahshik.kim@uspto.gov].

*All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

AK

Ahshik Kim Primary Examiner
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